
Operation

The Meridian 1 views the RILC as four Meridian 1 telephones, when configured as stations in the Meridian 1 database. It responds to all system diagnostic messages in the same manner as a station set. Unlike the SL-1 telephone, the RILC does not have flexible keys and requires features to be assigned to specific keys.

The RILC can be configured as ADM trunks and all features available to such trunks are applicable to the card, including linear or round-robin hunting, trunk group restrictions, and Call Data Record (CDR).

Call disconnect

After the data call has been set up, it can be disconnected by different methods depending on the mode of operation:

- Call disconnection in modes 8, 9, 11, 12, 13, and 15
 - Long break lasting 1.2 s or more
 - Three short breaks, each lasting 100 ms or more and occurring within 2 s
 - Dropping the DTR lead for 100 ms or more. Do this by turning the terminal power OFF. In some terminals, the ON LINE/OFF LINE switch may drop DTR (see the user guide for the terminal).
 - Called-party disconnects first

- Call disconnection in Modes 10 and 14
In these modes, an established call can be disconnected by the long break, three short breaks, or when the called party disconnects first, as described above.
- Call disconnection in Modes 0, 1, 2, 3, 4, 5, 6, or 7
In these modes, an established call can be disconnected by the long break, three short breaks, or when the called party disconnects first, as described above. The call drops if either DSR or DCD leads toggle from ON to OFF.

Keyboard dialing (KBD)

The KBD feature provides the following capabilities. A call can be initiated with either keyboard dialing or the hotline.

- Autobaud and autoparity from 110 to 19200 bps. Parity includes mark, space, odd, and even (for seven-bit ASCII data only).
- call origination to local hosts
- call origination to remote hosts
- Ring again
- Auto-dial calling for calls to local hosts
- Speed-call
- Digit display

Database requirements

The database must meet these criteria:

- The primary and secondary DN must be single appearance DNs.
- For access to remote hosts, the class of service of the data DN for the RILC must allow external calls.
- The primary and secondary DN must be configured as an SL-1 telephone and, if desired, with the digit display (DDS) feature on it.
- The data DN and voice DN should be configured for Warning Tone Denied (WTD).
- The secondary DN and Call Transfer keys must be programmed if the RILC is to place calls to an outbound modem pool (not smart modem pool).
- The virtual keys of the SL-1 telephone are assigned as follows. Key 8 is reserved for future use and is left unassigned.

Feature key assignments	Key number
Data DN	0
Secondary data DN	1
Call transfer key	2
Auto-dial key	3
Ring again	4
Make busy key	5
Speed-call key	6
Display key	7
Release	9

Note: When the host option is selected (switch 3 in host position), DDS messages from the Meridian 1 to the external device are suppressed at the RILC. DDS can be programmed off in the database to reduce the possibility of Meridian 1 output buffer overflow conditions. In the host mode, it is more desirable to configure the RILC as ADM trunks.

Keyboard menu

KBD with the RILC is easy to use because the user-friendly prompts guide you through the operating steps. ENTER NUMBER OR H (FOR HELP) appears on the screen first after entering <CR>. If H is entered, the main menu, which follows, is used to determine the call or function type:

A—AUTO DIAL	S—SPEED CALL
C—CALL	M—MODIFY
D—DISPLAY	

SELECT:

If M is entered from the main menu, the following submenu appears:

A—AUTO NUMBER	R—REMOTE LOOPBACK
S—SPEED NUMBER	Q—QUIT MODIFY

SELECT:

Some typical messages and prompts are shown in [Table 14](#).

Table 14
Typical messages and prompts (Part 1 of 2)

No.	Message	Circumstance
1	ENTER NUMBER OR H (FOR HELP)	Immediately after autobaud/<CR> at the terminal
2	CALLING nnnn	Dialing the DN
3	CALL CONNECTED. SESSION STARTS (bell)	Remote data module answers
4	BUSY, RING AGAIN? (Y/N)	Called DN is busy but ring again may be placed
5	ENTER REMOTE NUMBER:	Dialing remote host outbound modem pool
6	MODEM RESERVED ENTER REMOTE NUMBER:	Accessed modem reserved Dialing remote DTE
7	RING AGAIN PLACED	Ring again placed on Meridian 1
8	RELEASED	When call is released
9	DATA STATION NOW AVAILABLE. PLACE CALL? (Y/N) (bell)	Ring again available
10	ENTER ACCESS CODE:	Request for entry of speed-call access number
11	SERVICE UNAVAILABLE RELEASED	Meridian 1 is not responding to requested service, modem time out, or ring no answer
12	NO SYSTEM RESPONSE REENTER:	RILC unit to Meridian 1 signaling is failing; check system status of unit
13	INCOMING CALL CONNECTED (bell)	Automatic answering
14	INCOMPATIBLE INCOMING CALL. RELEASED	Auto-answer not possible; module originating call was set to synchronous operation; the RILC cannot match the baud rate; or data bit/parity configuration not supported by the RILC

Table 14
Typical messages and prompts (Part 2 of 2)

No.	Message	Circumstance
15	REMOTE LOOPBACK (Y/N)	Prompt for loopback to be set on subsequent call
16	INVALID COMMAND/ENTRY REENTER:	
17	UNDER TEST	Auto-answer with calling party requesting loopback
18	BAUD RATE = nnnn. REMOTE LOOPBACK = Y or N. AUTO DIAL NO. = nnnnnnnnnnn	Displayed when user types D <CR> at the ENTER NUMBER OR H (FOR HELP) OR SELECT D<CR> from the main menu prompts

Procedure 3 provides the steps used when operating a terminal with KBD. Keyboard dialing is applicable only to ASCII, asynchronous start stop character mode devices not configured for hotline operation. Units configured for host operations (switch 3) do not receive prompts and indications. However, blind dialing is supported for these devices. Synchronous or block mode devices are not supported.

Procedure 3
Keyboard dialing with the RILC (Part 1 of 7)

Step	Action	Terminal echo	Prompt or indicator	Comment
	Start condition.			Data station idle. Terminal and RILC power on.
1	Enter <CR> or <CR> (.) <CR>		ENTER NUMBER OR H (FOR HELP)	Go to step 6 or 10 if the number is to be entered instead of H. If you are familiar with the menu, you may use the command (for example, C, <CR>, A, S) instead of H. Go to step 3, 4, or 5 if a "MENU" command is entered instead of H.
If autobaud has been selected by faceplate switches 6, 7, and 8, <CR> causes the RILC to autobaud. (.) <CR> causes the RILC to automatically select the correct parity for the KBD messages.				
2	Enter H <CR>	A – AUTO DIAL C – CALL D – DISPLAY SELECT:	S – SPEED CALL M – MODIFY	
3	Auto-dial active?			If yes, go to step 21. If not, continue.
4	Speed-call active?			If yes, go to step 22. If not, continue.
5	Enter C <CR>	C	ENTER NUMBER:	
CALL TO OTHER DEVICES USING DIGITAL CONNECTION				Go to step 10 for call to remote device in the same digital network.

Procedure 3
Keyboard dialing with the RILC (Part 2 of 7)

Step	Action	Terminal echo	Prompt or indicator	Comment
6	Enter number NNNN <CR>.	NNNN	CALLING NNNN	The number of digits dialed may vary with the local dialing plan. All numeric and alphanumeric input, #, and * are accepted. During call setup all legal user input appears on terminal screen. RILC sends digits to Meridian 1, which places call to host. Meridian 1 sends digits NNNN back to the RILC and terminal.
7	Called device answers (if busy, see steps 16 or 21).		CALL CONNECTED. SESSION STARTS	Data Modules perform handshake and data channel becomes transparent.
8	Follow login procedures.			Data session begins.
9	Proceed with data session.			KBD is complete. The answering device must provide all further messages or input echo. Go to step 34 for disconnect procedures.

CALLS VIA MODEM POOL

10	Enter modem number NNNN <CR>.	All digits typed	Calling NNNN	
11	Modem answers.		MODEM RESERVED ENTER REMOTE NUMBER:	Modem is reserved.

Procedure 3
Keyboard dialing with the RILC (Part 3 of 7)

Step	Action	Terminal echo	Prompt or indicator	Comment
12	Enter remote number digits <CR>.	All digits typed.	CALLING NNNNNNN;	The Meridian 1 places a call to the remote number.
13	Remote modem answers.		CALL CONNECTED. SESSION STARTS.	The call is connected. (If busy, go to step 20.)
14	Follow login procedures.			Data session begins.
15	Proceed with data session.			KBD is complete. The answering device must provide all further messages or input echo. Go to step 34 for disconnect procedures.

CALLED DEVICE IS BUSY—RING AGAIN ACTIVE?

16	Called device busy.	Number digits	CALLED NNNN BUSY, RING AGAIN? (Y/N)	
17	Enter Y <CR>	Y	RING AGAIN PLACED	The RILC uses the Meridian 1 Ring Again feature to retry the call.
18	Called device available for incoming call.		DATA STATION NOW AVAILABLE. RING AGAIN? (Y/N)	A bell character (CONTROL G) is sent to the local device in terminal operations.
19	Enter Y<CR>			Meridian 1 automatically places call (go to steps 7 or 13).

Procedure 3**Keyboard dialing with the RILC (Part 4 of 7)**

Step	Action	Terminal echo	Prompt or indicator	Comment
CALLED DEVICE BUSY—NO RING AGAIN				
20	Called device is busy or not answering.		SERVICE UNAVAILABLE	
AUTO DIAL ACTIVE? (Note)				LOCAL DEVICE ONLY
21	Enter A <CR> at “Enter a number or H (for Help)”		CALLING NNNN	RILC sends DDN and auto-dial indication. Meridian 1 places the call to the predesignated number. Return to step 7.
SPEED CALLING ACTIVE? (Note)				All speed-call numbers must be programmed in database against the user DDN.
22	Enter S <CR> at “Enter a number or H (for Help)”	S	ENTER ACCESS CODE:	
23	Enter N <CR>	N	CALLING N>NNNNNNN	RILC sends DDN and speed-call index. Return to steps 7 or 13.
DISPLAY ACTIVE? (Note)				Used to display terminal parameters of the user DDN.

Procedure 3
Keyboard dialing with the RILC (Part 5 of 7)

Step	Action	Terminal echo	Prompt or indicator	Comment
24	Enter D <CR> at "Enter a number or H (for Help)."		BAUD RATE = NNNN REMOTE LOOPBACK = N AUTO DIAL NO = NNNN A - AUTO DIAL S - SPEED CALL C - CALL M - MODIFY D - DISPLAY SELECT:	

Note: To select these functions, the terminal must be at the prompt: "Enter Number or H (for Help)."
When you enter H, the main menu allows you to select one of the following: A-Auto dial, D-Display, S-Speed call, M-Modify.

The baud rate must be manually reset at the DTE/DCE (see user guide):
 — power down DTE/DCE (or enter break or drop DTR)
 — change baud rate at DTE/DCE
 — power up DTE/DCE
 — enter <CR> to autobaud

It may be verified after resetting by autobauding again with <CR> and again using the D command. The other parameters are modified as shown in the following steps.

MODIFY ACTIVE? (see Note above)

Used to modify RILC unit features.

25	Enter M <CR> at "Enter a number or H (for Help)."	M	A—AUTO NUMBER S—SPEED NUMBER SELECT: R—REMOTE LOOPBACK Q—QUIT MODIFY	If you enter: A—go to step 26 S—go to step 28 R—go to step 31 Q—go to step 33
----	--	---	--	---

Procedure 3**Keyboard dialing with the RILC (Part 6 of 7)**

Step	Action	Terminal echo	Prompt or indicator	Comment
MODIFY AUTO DIAL				
26	Enter A <CR>	A	AUTO DIAL NO =	
27	Enter new number <CR>	New number	A—AUTO NUMBER S—SPEED NUMBER SELECT: R—REMOTE LOOPBACK Q—QUIT MODIFY	Auto-dial number is changed. Select another feature or go to step 33.
MODIFY SPEED CALL				
28	Enter S<CR>	S	ENTER ACCESS CODE:	
29	Enter X <CR>	X	SPEED NUMBER:	
30	Enter new number <CR>	New number	A—AUTO NUMBER S—SPEED NUMBER SELECT: R—REMOTE LOOPBACK Q—QUIT MODIFY	New number is set. Select another feature or go on to step 33.
MODIFY REMOTE LOOPBACK				
31	Enter R <CR>	R	REMOTE LOOPBACK Y OR N <CR>	Used to verify transmitted data from test station to terminal with remote loopback 4. Read results at the test station.

Procedure 3
Keyboard dialing with the RILC (Part 7 of 7)

Step	Action	Terminal echo	Prompt or indicator	Comment
32	Enter Y or N <CR>	Y or N	A—AUTO NUMBER S—SPEED NUMBER SELECT: R—REMOTE LOOPBACK Q—QUIT MODIFY	Remote loopback is Y or N. Select another feature or go to step 33.

QUIT MODIFY (Note)

33	Enter Q <CR>	Q	A—AUTO NUMBER C—CALL D—DISPLAY SELECT: S—SPEED CALL M—MODIFY	Try any other feature or place a Data Call
----	--------------	---	---	---

CALL DISCONNECT PROCEDURES

- 34** Call disconnect is not a part of KBD; however, it returns the user to KBD procedures. Refer to paragraphs on call disconnects for more information.
- 35** Call disconnected. **RELEASED** The user has been returned to KBD, ready for entry at step 1.

Note: Q <CR> must be entered before implementing feature changes.

Meridian 1
QPC723, RS-232 Interface
Line Card
Description, installation, and
operation

© 1987,1994 Northern Telecom

All rights reserved

Information is subject to change without notice.

Northern Telecom reserves the right to make changes in design or components as progress in engineering and manufacturing may warrant. This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC rules.

SL-1 and Meridian 1 are trademarks of Northern Telecom.

Publication number: 553-2731-106

Document release: Standard 4.0

Date: December 1994

Printed in the United States of America